

REMARKS

Claims 1-9 are pending in the above-identified patent application. Claims 1 and 7 are independent.

In an office action dated May 22, 2006, the Examiner used Heller and Dunn to reject claims 1-7 as being obvious.

Claims 1 recites "modeling said locale with site-specific information using a network of states and transitions with probabilities." Claim 7 recites "modeling means to model said locale with site specific information using a network of states and transitions with probabilities." Heller and Dunn fail teach or suggest this quoted claim feature, whether taken separately or in combination.

Heller discloses a method and system utilizing both radio frequency (RF) and infrared (IR) signals within a tracking environment. Heller's invention depends on the physical nature of IR signal to determine the location of tracked subject. Each badge (mobile unit) initiates both RF and IR transmissions at a timed interval and can be prompted to do so when a button is pushed. A method is disclosed to switch between different communication modes, thereby conserving energy and extending battery life. Each badge is encoded with a fixed identification data, which is included in transmission. The Examiner acknowledges that Heller (the Examiner's primary reference) fails to teach (a) plurality of probes, and (b) device using the whereabouts of the mobile device and network of states and transitions with probabilities. These are very important features of applicant's invention, which the Heller reference does not teach. Furthermore, contrary to Heller's invention, information can be transmitted to the mobile unit, called tag, for notification either by audio, LED or vibration. These features are used to enhance the system capabilities with public announcement using either audio or display. Also contrary to Heller, the battery power is calculated to limit tag's life span according to the present invention. Together with a 2 parts identifier, the present invention allows for reuse of tag's identifier in addition to the obvious benefit--improved efficiency in communication. Furthermore, the communication method disclosed in the present invention is different from Heller's in that the tag responds to beacons from the

probes instead of initiating transmission on its own. Queries of whereabouts of tags at various locations are supported for certain applications for better communications.

As a result of the deficiencies of Heller, the Examiner relies on Dunn for an obviousness argument. The Dunn reference does not cure these deficiencies. Dunn discloses a system utilizing existing systems, e.g., cellular networks, for locating end users of the cellular network for roaming purposes. The local servicing offices (LSO) and regional service points (RSP) disclosed by Dunn are control devices for interfaces with other network elements. Therefore, Dunn's focus is completely different from that of the present invention. Even though there are provisions to provide queries remotely for location of end users, Dunn's focus is to supplement the capabilities of existing networks to arrive at such functionality. Further, the section relied upon by the Examiner for disclosing the concept of "probabilities" is disclosed in an alternative embodiment and does not suggest the use of probabilities to determine the location of mobile devices as contemplated by the present invention. Information of the tracking environment of the present invention is modeled using a network of states and transitions with probabilities. This model is used not only to calculate the probable movement of each tag (mobile device) through this defined locale, but also to monitor any unforeseen changes to such locale (useful in an exhibition hall application). When such event occurs, a system operator will be alerted and this locale model is updated.

The functionalities of location query and notification disclosed in the present invention go far beyond both Heller and Dunn.

Accordingly, independent claims 1 and 7 are not rendered obvious by Heller and Dunn, whether taken separately or in combination.

It is believed that all of the pending claims have been addressed. However, the absence of a reply to a specific rejection, issue or comment does not signify agreement with or concession of that rejection, issue or comment. In addition, because the arguments made above may not be exhaustive, there may be reasons for patentability of any or all pending claims (or other claims) that have not been expressed. Finally, nothing in this paper should be construed as an intent to concede any issue with regard to any claim, except as specifically stated in this paper, and the amendment of any claim does not necessarily signify concession of unpatentability of the claim prior to its amendment.

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Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Alex Cheng', written over a horizontal line.

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